# Darwin's pickles

London's Natural History Museum has one of the largest and oldest collections of specimens in the world but only a tiny fraction has been on show to the public, until now. The first phase of a new Darwin Centre aims to change all that. **Nigel Williams** reports.

The Natural History Museum in London launched this month the first phase of a major project that will allow visitors not only greater access to its vast collections of specimens, but also the sight of researchers working with the material on several major research projects.

Phase one of the new Darwin Centre at the museum, allows the public showing of 22 million zoology specimens preserved in jars of alcohol. The collection covers more than 200 years of scientific discovery and includes creatures collected by Captain Cook on his Endeavour voyage in 1768 and animals collected by Charles Darwin on his historic HMS Beagle expedition.

The collection is stored in 450,000 glass jars of alcohol and needs to be kept in carefully controlled conditions. The collection is now housed in a cold store where the temperature is kept at 13ºC, below the flash point of alcohol. The constant low temperature greatly reduces fire risks and special alcohol sensors in the storerooms alert the extraction systems if there is an alcohol spillage.

The Victorian approach to museum building was to maintain a distinct barrier between staff and public areas. But in the Darwin Centre, the public can go behind the scenes and explore the museum's work.

Visitors can look through a glass screen into the storerooms and up through the six-storey atrium to appreciate the volume of material kept there. Illuminated floor-to-ceiling cases allow a close-up view of specimens. Guides lead visitors among the collections to explain their importance.

Another significant improvement is the introduction of the tank room, which houses large stainless steel containers for bigger specimens such as swordfish, loggerhead turtles, conger eel and giant squid. The largest tank is four metres long.

Phase two of the Darwin Centre, due to open to the public in 2007, will house the museum's entomology and botany specimens. The collections include important material collected by Sir Hans Sloane in the 17th century, given to the nation on his death in 1753. The 'dry' collections of phase two are susceptible to attack from pests and we need to be made airtight. "Our beetle collection is the principle point of reference for scientists across the world wishing to combat crop blight," says Martin Brendell, lead curator of entomology. "Built up over 100 years, it's still mostly stored


**Up close:** A visitor looks at one of the many fish specimens on display to the public for the first time with the opening of the first phase of the Darwin Centre at the Natural History Museum in London this month. A daily programme of tours and talks will help ensure that visitors get a feel for the extent and importance of the millions of specimens held at the museum.

**Fin the open:** a curator displays one of the fish exhibits newly on show at the museum. The public now have unprecedented access to the collection of alcohol-preserved animals ahead of further work on on dried specimens.

within mahogany trays. The preserved beetles are in constant danger of predators," he says.

Completion of the Darwin Centre project will increase access, both physically and electronically, to almost 80 per cent of the Museum's collection of 80 million specimens.

The museum is taking part in major projects to fulfil Britain's commitments to the UN Convention on Biodiversity, with particular emphasis on invertebrate animals and plants such as ferns, quillworts, mosses and lichens. The museum is also collaborating in other international projects. With the National Autonomous University of Mexico and the Missouri Botanical Garden a botanical flora of central America is being created. This is a region of enormous plant diversity but under great threat. The museum is also collaborating with Kasetsart University in Thailand and the Plymouth Marine Laboratory to study biodiversity in mangrove swamps, a species-rich habitat facing serious reduction with the rapid development of prawn farms.

Further work on invertebrates involves the study of parasitic copepods, which are the biggest hazard for farmed salmon species. The work involves study of how these parasites locate and infect their hosts, and ways to stop these infestations. The museum has specimens of copepod crustaceans ranging from the deepest ocean trenches to damp leaf litter in the Himalayas. Research is aimed at unravelling the evolution of the copepods to help throw light on how they moved from a free-living to a parasitic lifestyle.

"We have 350 scientists based at the museum," says Phil Rainbow, head of zoology. "Working in partnership with over 60 countries worldwide, we are using our applied knowledge to help find solutions to pests, parasites and diseases. The Darwin Centre will now bring this important work out from behind the scenes."

**On show:** Some of the 450,000 specimens preserved in alcohol now open to public view in a state-of-the art facility bringing together the public and Natural History museum researchers for the first time.